

10.0 DEVELOPING YOUR OWN QUESTIONNAIRE

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SECTION 10.0

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10.0 DEVELOPING YOUR OWN QUESTIONNAIRE

- 10.1 The DIETSYS software can be used to analyze customized versions of the HHHQ. The food list is the core component of the questionnaire used in the DIETSYS analysis. You may add, delete or rearrange items in the food list. Once you have selected a list of foods and the format of the food frequencies, you may then incorporate any subset of the HHHQ Questions into your questionnaire. HHHQ Questions are the demographic, health habit, and diet-related questions found on any of the NCI questionnaire versions. In addition, you may include questions of your own design which are specific to your field of interest. These "Other Questions" will not be analyzed by DIETSYS, but can be included in the questionnaire data file along with the Food Frequencies and the HHHQ Questions.

Reviewing the three NCI versions of the HHHQ included with this software may be the best way to begin developing your questionnaire. It is common for investigators to use a modified version of one of these. However, you may not simply "cut-and-paste" a mixture of questions (verbatim) from SCAN92, BRIEF87, and FULL87. The SCAN92 questionnaire uses a different format for frequencies than do BRIEF87 and FULL87. As will be discussed in Sections 10.3 and 10.4, you may not mix the two formats on one questionnaire.

In the development of your questionnaire, you must follow the DIETSYS guidelines discussed in the following sections to code the responses to the Food Frequencies and HHHQ Questions.

Once you have designed your paper questionnaire, you must describe the questionnaire to DIETSYS by creating a Configuration File (CFG File). The process for creating a CFG File is described in Section 11. DIETSYS then uses the CFG File for locating and de-coding all of the variables required by DIETSYS.

- 10.2 The first decision to be made when developing a paper DIETSYS questionnaire is whether the forms will be optically scanned or key-punched. (If using the DIETSYS Interactive Interview rather than paper questionnaires, see Section 13.) The most common method of scanning questionnaires is the mark-sense scanning method. Mark-sense forms are those with ovals or bubbles which line up with the valid responses. The respondent shades in the ovals. Scannable questionnaires in the mark-sense format must be coded in the "Categorical" format described in Sections 10.3 and 10.4.
- 10.3 Food Items. Food frequencies, serving sizes and the DIETSYS Foods Database values are used to calculate each respondent's nutrient estimates. It is recommended that serving size be asked with each food frequency. If serving size is not asked, MEDIUM will be imputed by the DIETSYS Analysis for each food. The food frequency combined with the serving size are referred to as the 'food code'.

One of two formats may be used for the food frequency questions. The "Categorical" format uses 1 character to code the food frequency. The respondent selects a frequency from a list of up to 9 possible frequency ranges. One digit or letter is assigned as the input code for each of the possible frequencies. When the questionnaire data is key-punched or scanned, the appropriate one character frequency code is input for each food item. The SCAN92 questionnaire uses the Categorical Format for food frequencies as shown below.

TYPE OF FOOD	HOW OFTEN								
	NEVER OR LESS THAN ONCE PER MONTH	1 PER MONTH	2-3 PER MONTH	1 PER WEEK	2 PER WEEK	3-4 PER WEEK	5-6 PER WEEK	1 PER DAY	2+ PER DAY
FRUITS AND JUICES									
Apples, applesauce, pears	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bananas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The recommended coding scheme for the above set of frequencies is to use a "1" for the first column, a "2" for the second column, etc. If the above example is coded in the recommended format, the following coding scheme would apply:

- 1 = Never
- 2 = 1 Per Month
- 3 = 2-3 Per Month
- 4 = 1 Per Week
- 5 = 2 Per Week
- 6 = 3-4 Per Week
- 7 = 5-6 Per Week
- 8 = 1 Per Day
- 9 = 2+ Per Day

The exact frequency values assigned to each code and used for calculations in the DIETSYS Nutrient Analysis are read from the CFG File. If you have modified the column headings or have reversed the order of the columns on your questionnaire, be sure to set the appropriate values for the frequency codes. See Section 11.9 for setting the food frequency coding schemes in the CFG File.

The Non-Categorical food frequency format is the format used for the food items on the BRIEF87 and FULL87 questionnaires. In this format, the respondent actually writes the number of times each food is eaten and specifies the unit of time (day, week, month, etc). Examples of food frequencies presented in this format are shown below.

FRUITS & VEGETABLES	HOW OFTEN?				
	Day	Week	Month	Year	Never
Apples, applesauce, pears					
Cantaloupe (in season)					

The Non-Categorical format uses 3 digits to code each food frequency. The first 2 characters of the frequency specify the number of times. The third digit is the code for unit of time, where 1 = DAY, 2 = WEEK, 3 = MONTH, and 4 = LARGEST TIME UNIT, 5 = NEVER. The "LARGEST TIME UNIT" is typically year (52 weeks), but this may be set to 6 months (26 weeks) or some other time

period. The number of weeks used for R E s t
CFG file (See Section 11).

DIETSYS requires that the same format be used for the vitamin supplement frequencies as is used for the food frequencies. In addition, many of the HHHQ Questions have a "Categorical Format" and a "Non-Categorical" coding format. The same format must be used for all HHHQ Questions as is used for the food frequencies.

Serving size is a 1 character field which, if asked, must either be the first character or the last character of each food code. If the food frequencies are in the Categorical format, serving size may be coded as the first or second character of the two character food code. If the food frequencies are in the Non-Categorical format, serving size may be coded as the first or fourth character of the four character food code. If serving size is not asked as missing, medium is imputed.

- 10.4 HHHQ Questions. A non-dietary or diet related question extracted from an NCI version of the HHHQ. These questions are all questions on the HHHQ which are not food frequencies but have some impact on the DIETSYS nutrient analysis or in the calculations of the health indices.

In order for the DIETSYS software to analyze the responses to the HHHQ Questions, these questions must be coded according to the specifications detailed in Section 10, Appendix A. Appendix A also discusses the impact each HHHQ Question has on the DIETSYS analysis.

NOTE: Many of the HHHQ Questions have a "Categorical" and a "Non-Categorical" coding format. DIETSYS requires that the same format be used for all HHHQ Questions as is used for the food frequencies.

- 10.5 "Other questions". These questions are not analyzed in any way by the DIETSYS software but are included in the questionnaire data file. The DIETSYS Data Entry System may be used to enter this data along with the coded responses to the HHHQ segment of your questionnaire.

If using the DIETSYS Data Entry System, simply include "Other Questions" in the question list when setting up DIETSYS for data entry of your questionnaire. Setup of the DIETSYS Data Entry System involves creating a CFG file specifically for your questionnaire. During a data entry session, you will be prompted for the "Other Questions" as well as the food frequencies and HHHQ Questions. Section 11 contains instructions for creating a CFG File.

- 10.6 Open Ended Foods. Open Ended foods are foods which are volunteered by the respondent, or they may be presented in a list from which the respondent selects foods which s/he eats with some minimum frequency. The foods selected can be different for each respondent and the respondent will not give a frequency for every food in the Open Ended food list. Therefore, when coding the questionnaire, the identity of the food must be coded as well as the frequency. Open Ended food questions are the only food questions which require the identity of the food to be stored in the questionnaire file.

The following data segments are used to code each Open Ended food, they may appear in any order:

- A. **Open Ended Food Identifier.** The only foods which can be used as Open Ended foods are those with database sequence numbers from 100 through 198. To code the identity of the Open Ended foods, use the last 2 digits of the database sequence number. For example, Veal has database sequence number 101. If Veal is used as an Open Ended food, 01 is the correct Open Ended identifier.

Valid Codes for Open Ended Food Identifier:

00-98 = Represent Foods 100 - 198 in the DIETSYS Foods Database.

NO BLANKS PERMITTED, USE LEADING ZEROES.

99 = Unstated

- B. **Serving Size.** If serving size is asked with the foods in the Main Food List it must be included with all Open Ended foods. The serving size code for each Open Ended food must be directly adjacent to the frequency code, that is, the Open Ended Identifier cannot appear between the serving size and frequency codes. In addition, if serving size is coded before frequency for foods in the Main Food List, it must be coded before frequency when coding foods in Open Ended Sections. Likewise, if serving size is coded after frequency for foods in the Main Food List, it must be coded after frequency when coding foods in Open Ended Sections.
- C. **Frequency.** Section 10.3 contains the coding instructions for frequency. If the foods in the Main Food List of the questionnaire are coded in the 3 digit Non-Categorical format, all Open Ended foods must be coded in the same Non-Categorical format. However, if the foods in the Main Food List of the questionnaire are coded in the Categorical format, the Open Ended foods on the questionnaire may be coded using either format.

10.7 Coding of missing data. Every response on your questionnaire must use the same code for unstated or no response. The character used as the code for unstated is referred to as the "Missing Code". The Missing Code must be '9' for Non-Categorical questionnaires. For Categorical questionnaires, any **non-digit** character may be used. For example, "M" may be used for missing responses.

10.8 Card vs. Non-Card file format. Cards are defined as 80 character data lines with an alphabetic card identifier in the 79th column. The card identifiers must be upper case letters. The cards must appear in sequence from card 'A' to card 'Z' (if using 26 cards). A maximum of 26 cards may be used. Typically, 7-12 cards will be required to store the data from each questionnaire.

Previous versions of HHHQ software required that questionnaire data be stored in Card format. However, DIETSYS Version 3.0 can read questionnaire data stored in Non-Card format. Data files using Non-Card format must contain one line of data per questionnaire. Each line must contain a 10 character Respondent ID. Up to 999 characters may be used to store the coded responses of each questionnaire. Each data line must be the same length.

It is recommended that Card format be used for data files containing FULL87 and BRIEF87 questionnaire data. The file locations of all variables are printed on the FULL87 and BRIEF87 questionnaire forms. These locations correspond to the questionnaire files when in Card format.

However, it is recommended that Non-Card format be used for questionnaire data files for customized questionnaire versions. You may find it easier to manipulate one line of data per questionnaire.

SCAN92 questionnaire files should always be stored in Non-Card format.

10.9 Once you have considered the topics discussed in Sections 10.1 through 10.8, follow the steps below to develop your questionnaire.

1. Select the foods for your food list. Each food is identified by a DIETSYS Food ID. The Food ID corresponds to the sequence number of the food in the DIETSYS Foods Database. Therefore, Food IDs range from 1 to 207.

If you wish to include foods which are not already in the DIETSYS Foods Database, you must supply the nutrient content and portion size data, as well as other calculation factors for each new food. You must then use the DIETSYS Foods Database Editor to add these data to the database. See Section 12 for information on the data required for each food and instructions for using the DIETSYS Foods Database Editor.

You will not be able to complete the process of developing your questionnaire until you have added any necessary foods to the DIETSYS Foods Database.

2. Select the HHHQ Questions to be included on your questionnaire. Each of the HHHQ Questions is listed in Section 10, Appendix A. Review this list and choose the questions which you wish to incorporate into your questionnaire. Consider the impact of each question on the DIETSYS analysis.

When printing your questionnaire, be sure the HHHQ Questions are asked so that they will be coded correctly. In particular, be careful to use the appropriate format. That is, if your food frequencies are in the Categorical Format, all HHHQ Questions must be asked in their Categorical Format and vice versa. (Some HHHQ Questions are coded the same way for both Categorical and Non-Categorical questionnaires.) The coding requirements for each HHHQ Question are discussed in Section 10, Appendix A.

3. Prepare the "Other Questions" to be used on your questionnaire. For each of these questions, determine the number of characters that will be required to code the response in the questionnaire data file. In addition, note the type of character that will be used to code each of the "Other Questions". That is, is this a numeric field, alphabetic field or alpha-numeric.
4. Determine the sequence of all questions on your questionnaire.

5. Create a CFG file for your questionnaire by following the instructions in Section 11. Print and review a codebook from this CFG file to verify your questionnaire configuration.
6. Do a dry run. Using a draft version of your questionnaire, answer all questions and code the questionnaire. Even if you intend to optically scan the questionnaires, you should key-punch one or two draft samples to verify the configuration before printing final copies. Use the DIETSYS software to practice analyzing and edit-checking these sample questionnaires. This is essential to ensure that all required questions have been included, and proper coding allowed for.

APPENDIX A

Questionnaire Coding Instructions

10A.1 DIETSYS analyzes data from the following types of questions:

1. Food frequencies from a set list of food items (main food frequency section).
2. Food frequencies from "Open-Ended" food lists.
3. HHHQ Questions.

Food frequencies from a set list of food items. Refer to the FULL87 questionnaire. Pages 5-6 of this questionnaire contain what is referred to in this document as the "Main Food List" or the "Food Items". These are food frequencies asked of the respondent for specific foods. All respondents will have a coded answer for every single food on this list. The response will either be a valid frequency or a code for "unstated". For example, every respondent of the FULL87 questionnaire will have a coded response to the "Apples, Applesauce, Pears" food item.

Food frequencies from "Open Ended" food lists. Question 14 on page 7 of the FULL87 questionnaire illustrates the concept of Open Ended food frequencies. The respondent has the option of volunteering a food not previously asked, or of choosing 1 or more foods from a list as shown at the bottom of FULL87 page 7. The Open Ended list contains foods which were not asked in the regular Food List.

The only difference between Open Ended foods and Food Items is in the way the respondent is prompted for them.

Code foods in the main food list according to the specifications in Section 10.3.

Code foods in open-ended lists according to the specifications in Section 10.6.

Code HHHQ Questions according to the specifications in the following pages. If you are looking for the coding instructions for a specific HHHQ Question, refer to the reference table on page 10A-2 for the appropriate page number.

The following reference table has been provided as an easy look up for the HHHQ Questions. The questions have been broken into categories. The number of the question as it appears on the FULL87 and SCAN92 questionnaires are given along with the name of the question.

HHHQ QUESTION REFERENCE TABLE

HHHQ QUESTION	SECTION	Question #	
		FULL87	SCAN92
RESPONDENT ID	10A.2		
PERSONAL INFORMATION			
Address	10A.3	Page 1	-
Age	10A.4	2	3
Birth Date	10A.5	1	-
Education	10A.6	5	-
Marital Status	10A.7	6	-
Moves - number in last 10 years	10A.8	7	-
Name	10A.9	Page 1	-
Race	10A.10	4	-
Sex	10A.11	3	2
Numeric State Code	10A.12	Page 1	-
Social Security Number	10A.13	Page 1	1
Telephone Number	10A.14	Page 1	-
QUESTIONNAIRE INFORMATION			
Coder (reviewed by...)	10A.15	Page 10	-
Date (6 character format)	10A.16	Page 1	4
Respondent's Relation to person in study	10A.17	Page 1	-
DIETARY HABITS			
Restaurant Frequencies	10A.19	12	16
How often do you:			
add salt to your food?	10A.18	15	15a
add pepper to your food?	10A.18	15	15b
use fat or oil in cooking?	10A.22	16	18a
eat the fat on meat?	10A.18	15	15d
eat the skin on chicken?	10A.18	15	15c
How many			
servings of vegetables do you eat?	10A.22	20	18b
servings of fruit do you eat?	10A.22	21	18c
servings of cold cereal do you eat?	10A.22	-	18d
What type of fat do you use:			
at the table?	10A.20	18	13
in cooking?	10A.20	17	12
What kind of cold cereal do you eat?	10A.21	19	-

HHHQ QUESTION REFERENCE TABLE

HHHQ QUESTION	SECTION	Question #	
		FULL87	SCAN92
FAT CONTENT OF FOODS, CUTS OF MEAT			
How often do you eat low-fat versions of: cheese, ice cream/yogurt, dressing?	10A.23	-	14
When you eat			
poultry - is it light or dark?	10A.24	-	-
tuna - is it oil or water packed?	10A.25	-	-
meat - is it regular, lean, extra lean?	10A.26	-	-
HEALTH & RISK FACTORS			
Are you on a special diet?	10A.27	11	-
Height	10A.28	31	6
Weight	10A.29	32	5
Most ever weighed	10A.30	33	-
Amount weight gained or lost	10A.31	22	-
Hours of sleep per night	10A.32	35	-
Number of times on a diet to lose weight	10A.33	34	8
How often do you feel stress	10A.34	36	-
Physical activities	10A.35	37	-
Close friends/relatives	10A.36	38	-
Social activities	10A.37	39	
SMOKING QUESTIONS			
Cigarettes	10A.38	8	7
Pipes or Cigars	10A.39	9	-
VITAMIN QUESTIONS	10A.40	10	9-11
MEDICAL INFORMATION	10A.41	23-26	-
OCCUPATIONAL INFORMATION	10A.42	27-29	-
FAMILY HISTORY	10A.43	30	-

10A.2 **RESPONDENT ID**

This field is required by DIETSYS for every questionnaire. RESPONDENT ID is a 10 character field.

If the questionnaire file is in Card Format, the RESPONDENT ID must be the first 10 characters of each card. On a specific questionnaire, this field will be identical for every card.

If the questionnaire file is in Non-Card Format, each questionnaire data line must contain a RESPONDENT ID, which may be in any position in the data line.

See Section 10.8 for the definitions of Card and Non-Card file formats.

10A.3 **ADDRESS**

51 Characters are expected for ADDRESS. Blanks are allowed in the address field. The segments of the address field must be stored in the following order:

<u>Field</u>	<u>Number of Characters</u>
Street Address	24
City	15
State	2 (letter abbreviation)
Zip	10 (#####-####)

If you wish to include Numeric State Code with address, add it as a separate question. ADDRESS is not used in any way by DIETSYS. If you choose to ask address in a different format, simply add the question to your CFG file as an "Other Question" rather than selecting ADDRESS from the list of HHHQ Questions.

10A.4 **AGE**

You have the choice of coding AGE in a 2 digit or a 1 digit format. The width of the AGE field is **NOT** dependent on whether the rest of the questionnaire is categorical or not. When creating the CFG file, you will be asked to specify the length of the AGE field. If you are creating a CFG file by modifying an existing file, be sure to set the AGE field length (See Section 11).

Age is used by the DIETSYS Nutrient Analysis program to determine which age-sex specific portion sizes to use. In addition, the Predict analysis factors are dependent on age. If age is not coded explicitly as number of years in a 2 digit field, DIETSYS determines which portion sizes to use based on information stored in the CFG file.

2 Digit Format:

01-97 = age in years

98 = 98 or older

NO BLANKS PERMITTED, USE LEADING ZEROES

Unstated = Two Missing Codes.

1 Digit Format:

Code as 1 through n, where n = the number of choices presented to the respondent. Use the missing code if unstated.

The 1 digit format is commonly used for questionnaires which are scanned. The following information regarding age may be modified as required. These parameters are only used if age is in the 1 digit format.

Age Code Parameters:

1. Number of valid age codes. The SCAN92 questionnaire has 7 categories for age. DIETSYS allows a maximum of 8 age categories to be used. 1-7 are the valid codes if there are 7 age categories, 1-8 if there are 8, etc. The Missing Code is used for unknown or unstated. 9 must be used for the Missing Code if the questionnaire is Non-Categorical. See Section 11 for instructions on setting the number of age codes. Print the Questionnaire Codebook to verify the coding of age.
2. Set of portion sizes to be used for each age category. Age-sex specific portion sizes may be used in the DIETSYS Nutrient Analysis (See Portions option, Section 16). The DIETSYS Foods Database contains three age-dependent portion sizes for each sex (Younger, Middle Aged, Older). See Section 11.15 for instructions on setting the portion size set for each age code on your questionnaire.
3. See Section 16 for Predict analysis option algorithm and Section 15 for instructions to set the Predict Age Categories.

10A.5 BIRTH DATE

BIRTH DATE is a 7 character field in the MMDDYYY format as described below:

MM = Birth Month, valid codes are 01-12 or 2 Missing Codes.
DD = Birth Day, valid codes are 01-31 or 2 Missing Codes.
YYY = Birth Century and Year.
1st digit = 8 or 9.
2nd & 3rd digit = 00-98.

If the respondent was born in 1961, the proper code for Birth Year is 961.
Use three Missing Codes if Birth Year is unstated.

BIRTH DATE is not used in any way by DIETSYS.

10A.6 **EDUCATION**

DIETSYS expects a 2 character field for this HHHQ Question. This question appears on the FULL87 questionnaire as shown below.

Please circle the highest grade in school you have completed:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16+

Although not shown on FULL87, an additional choice of graduate studies may be included as 17+. Valid coding for EDUCATION:

Grades thru college = 01-16
Post-graduate = 17
Unstated = 2 Missing Codes

The response to the EDUCATION question is not used in any way by DIETSYS.

10A.7 **MARITAL STATUS**

Examples: FULL87 Question 6.

The text and coding scheme for this HHHQ Question are:

What is your marital status?

Single = 1
Married = 2
Widowed = 3
Divorced/Separated = 4
Unstated = Missing Code

MARITAL STATUS is used by DIETSYS in the calculation of the "Scores for Non-dietary factors" (Section 19).

10A.8 **NUMBER OF MOVES**

This question is phrased as: "How many times have you moved or changed residences in the last ten years?"

DIETSYS expects a 2 digit field with the following coding scheme:

00-98 = number of moves
Unstated = Two Missing Codes.

NUMER OF MOVES is not used in any way by DIETSYS.

10A.9 **NAME**

NAME may use 47 or 32 characters in the questionnaire data file. Maiden name is optional. If maiden name is included 47 characters are expected for the name field. If maiden name is not included, 32 characters are expected. The segments of the name field must be stored in the following order:

<u>Field</u>	<u>Number of Characters</u>
Last Name	14
First Name	9
Middle Name	9
Maiden Name	15

If NAME is included in the CFG question list, it will be written to the DIETSYS Analysis Output File (Sections 15 and 17) and printed to the Analysis Report (Sections 15 and 18). NAME can also be used to locate a specific questionnaire in the DIETSYS Questionnaire Utilities (Section 20) and the DIETSYS Data Entry System (Section 13).

10A.10 **RACE**

DIETSYS expects the same 1 character code for both categorical and Non-Categorical questionnaires.

White, not of Hispanic Origin	=	1
Black, not of Hispanic Origin	=	2
Hispanic	=	3
American Indian, Alaskan native	=	4
Asian	=	5
Pacific Islander	=	6
Unknown, not stated	=	Missing Code

RACE is not used in any way by DIETSYS analyses.

10A.11 **SEX**

DIETSYS expects the same 1 character code for both categorical and Non-Categorical questionnaires.

Male	=	1
Female	=	2
Unstated	=	Missing Code.

SEX is used by DIETSYS Nutrient Analysis to implement the Portions and Predict analysis options (Section 16). SEX is also used by DIETSYS in the calculation of the "Scores for Non-dietary factors" (Section 19).

10A.12 **NUMERIC STATE CODE**

This is a 2 digit code as shown below:

01 Alabama (AL)	21 Maryland (MD)	41 South Carolina (SC)
02 Alaska (AK)	22 Massachusetts (MA)	42 South Dakota (SD)
03 Arizona (AZ)	23 Michigan (MI)	43 Tennessee (TN)
04 Arkansas (AR)	24 Minnesota (MN)	44 Texas (TX)
05 California (CA)	25 Mississippi (MS)	45 Utah (UT)
06 Colorado (CO)	26 Missouri (MO)	46 Vermont (VT)
07 Connecticut (CT)	27 Montana (MT)	47 Virginia (VA)
08 Delaware (DE)	28 Nebraska (NE)	48 Washington (WA)
09 District of Col. (DC)	29 Nevada (NV)	49 West Virginia (WV)
10 Florida (FL)	30 New Hampshire (NH)	50 Wisconsin (WI)
11 Georgia (GA)	31 New Jersey (NJ)	51 Wyoming (WY)
12 Hawaii (HI)	32 New Mexico (NM)	52 Puerto Rico (PR)
13 Idaho (ID)	33 New York (NY)	53 Virgin Islands (VI)
14 Illinois (IL)	34 North Carolina (NC)	54 Guam (GU)
15 Indiana (IN)	35 North Dakota (ND)	55 Canada
16 Iowa (IA)	36 Ohio (OH)	56 Cuba
17 Kansas (KS)	37 Oklahoma (OK)	57 Mexico
18 Kentucky (KY)	38 Oregon (OR)	59 Remainder of World
19 Louisiana (LA)	39 Pennsylvania (PA)	99 Unknown or blank
20 Maine (ME)	40 Rhode Island (RI)	

STATE CODE is not used in any way by DIETSYS.

10A.13 **SOCIAL SECURITY NUMBER**

A 9-digit number is expected. Nine Missing Codes should be used if unstated or unknown.

SOCIAL SECURITY NUMBER is not used in any way by DIETSYS.

10A.14 **TELEPHONE NUMBER**

The telephone number should be coded as a 10 digit field including the area code.

TELEPHONE NUMBER is not used in any way by DIETSYS.

10A.15 **CODER**

A 2 character field containing the initials of the person who coded the paper form. Two Missing Codes should be used if unknown.

The CODER information is not used by DIETSYS but may be needed by the investigator for future reference if more than 1 person codes forms.

10A.16 **DATE**

This date is a 6 character field in the MMDDYY format. This is the HHHQ Question used for "Questionnaire Date" on the BRIEF87 and FULL87 questionnaires and the "Today's Date" field on the SCAN92 questionnaire.

This HHHQ Question is not used by any of the DIETSYS analysis programs.

The Missing Character should be used to fill any or all segments of this field skipped by the respondent.

10A.17 **RELATION TO PERSON IN STUDY**

DIETSYS expects the same 1 character code for both Categorical and Non-Categorical questionnaires. The recommended phrasing and required coding as shown below.

What is your relationship to the person enrolled in the study?

Self	=	1
Spouse	=	2
Relative	=	3
Other	=	4
Unstated	=	Missing Code

The response to the RELATION question is not used in any way by DIETSYS.

10A.18 **DIETARY HABIT FREQUENCIES**

The questions listed below are four separate HHHQ Questions. But since these questions use the same coding scheme for frequency they are discussed together. Any subset of these questions may be included on your questionnaire. Each question has an impact on the DIETSYS Nutrient Analysis via the option listed.

<u>Question</u>	<u>Analysis Options</u>
How often do you eat the fat on meat?	MeatFat
How often do you eat the skin on chicken?	EatSkin
How often do you add salt to your food?	AddSalt
How often do you add pepper to your food?	Not analyzed by DIETSYS

Each of these questions is coded with one character. The same codes are used for both Categorical and Non-Categorical questionnaires.

Seldom/Never	=	1
Sometimes	=	2
Often/Always	=	3
Unstated	=	Missing Code

10A.19 RESTAURANT FREQUENCIES

This question is phrased as: "About how often do you eat the following foods from restaurants or carry outs?"

One or more of the following restaurants may be listed in any order on your questionnaire:

Fried Chicken
Burgers
Pizza
Chinese Food
Mexican Food
Fried Fish
Other Restaurants

The order the restaurants are listed must be set in the CFG file (Section 11). Print the code book and check that the order of the restaurants expected by DIETSYS corresponds to your questionnaire.

All restaurant frequencies must be coded in 1 contiguous field of up to 7 characters in width. The frequencies may be listed on the questionnaire in increasing or decreasing order. That is, "Never in Past Year" may be in the first column or in the last. This is specified in the CFG file. The frequency codes are listed below for both coding methods.

Codes

<u>Increasing</u>	<u>Decreasing</u>	<u>Questionnaire Text</u>
1	7	Never In Past Year
2	6	1-4 Times Past Year
3	5	5-11 Times Past Year
4	4	1-3 Times A Month
5	3	Once a Week
6	2	2-4 Times a Week
7	1	Almost Every Day

Use the Missing Code for Unstated. The RESTAURANT question is used by the DIETSYS Nutrient Analysis to implement the RESTADJ option (Section 16).

10A.20 TYPE OF FATS

There are 2 HHHQ Questions regarding fat type. They are:

What types of fat do you usually use in cooking (to fry, stir-fry, or saute)?

What types of fat do you usually add to vegetables, potatoes, etc?

The DIETSYS Nutrient Analysis uses these 2 HHHQ Questions to implement the ADDFATS option. At least one of these questions must be asked for the ADDFATS option to have an impact on the analyses.

Categorical Format:

1-10 characters are used to code the fat types corresponding to the number of fats listed on your questionnaire.

For each fat, code:

- 0 fat NOT SELECTED by respondent
- 1 fat SELECTED by respondent

A food from the DIETSYS Foods Database is assigned to each position in the Fat Type field. This information is set in the CFG File (Section 11).

The respondent is to be instructed to mark only one or two types of fat. If more than 2 fats are used, DIETSYS will choose 2 from the list by using the ADDFATS option algorithm (Section 16).

Non-Categorical Format

A 2 digit field is used to code the types of fat on Non-Categorical questionnaires. Each fat on the questionnaire is assigned a one digit code. The fat codes are set in the CFG File. See Section 11 to assign codes to the fats on your questionnaire. There are two sets of fat codes, one for "type of fat used in cooking"; and one for "fat added to vegetables".

If one answer is given, use the NO RESPONSE code for the second fat. If two answers are given code each fat with a valid fat code. NOTE: If three answers are given and two are a type of margarine, code one margarine in the first position and code the non-margarine fat in the second position.

10A.21 TYPE OF COLD CEREAL

DIETSYS expects a 3 character field for this HHHQ Question. This question appears on the FULL87 questionnaire as shown below.

If you eat cold cereal, what kind do you eat most often? _____

The respondent is asked to print the cereal name. When the questionnaire is coded, the Cereal Code from the DIETSYS Foods Database for the indicated cereal should be assigned. You may change the list of cereals in the Brand-Name Cereals section of the DIETSYS Foods Database as desired. See Section 12 for more information on the Brand-Name Cereals.

Code the three characters corresponding to the Cereal Code for the Brand-Name cereal specified. The first character of the Cereal Code is 'C'. The last two characters identify the cereal by its sequence in the Brand-Name Cereal section of the DIETSYS Foods Database. The 70 cereals in the Foods Database are represented by 01-70 in the last two characters.

In older software versions, the first character of the Cereal Code was 3, 4, or 5. In order to support data files created with older versions of the software the following codes are allowed. Note that only the last two characters are used to identify the cereal. However, the 1st character will be checked for validity, to prevent data entry errors.

Valid Codes For the 3 character Cold Cereal Code:

1st Character:

C, 3, 4, 5, or the Missing Code

2nd & 3rd Characters:

Cereal ID = 01-70

Unstated= Two Missing Codes

The TYPE OF COLD CEREAL response is used by the DIETSYS Nutrient Analysis to implement the CodeCereal analysis option (Section 16).

10A.22 SUMMARY FREQUENCIES

The questions listed below are four separate HHHQ Questions. But since these questions use the same coding scheme for frequency they are discussed together. Each question has an impact on the DIETSYS Nutrient Analysis via the option listed. Any subset of these questions may be included on your questionnaire.

<u>Question</u>	<u>Analysis Options</u>
How often do you use fat or oil in cooking?	AddFats
About how many servings of vegetables do you eat, not counting salad or potatoes?	VegAdj
About how many servings of fruit do you eat, not counting juices?	FruitAdj
About how many servings of cold cereal do you eat?	CerealAdj

The same frequency format (Categorical or Non-Categorical) must be used for each of these HHHQ Questions as is used for the Food List frequencies on the questionnaire. That is, if your food frequencies are in the Categorical format, DIETSYS will assume that the four questions listed above are coded in the Categorical format and vice versa.

Non-Categorical Coding of Summary Questions:

To see examples of these HHHQ Questions in their Non-Categorical format refer to the FULL87 Questionnaire. Three of these questions appear on the FULL87 questionnaire in their non-categorical format (Questions 16, 20, and 21 on FULL87). The non-categorical format for the questions is a 3 digit frequency.

Coding of Summary Questions (non-categorical):

1st two digits are number of times:

00-98 = number of times

99 = unknown or unstated

NO BLANKS PERMITTED, USE LEADING ZEROES

3rd digit is unit of time:

1 = Day

2 = Week

3 = Month

4 = Number of weeks set for largest time unit

5 = Never

9 = Unknown or unstated

Categorical Coding Scheme for Cooking Fat Frequency:

All of the SUMMARY FREQUENCY questions appear on the SCAN92 questionnaire (Question 18 a-d) in their Categorical format as show below:

	LESS THAN ONCE PER WEEK	1-2 PER WEEK	3-4 PER WEEK	5-6 PER WEEK	1 PER DAY	1 1/2 PER DAY	2 PER DAY	3 PER DAY	4+ PER DAY
a. How often do you use fat or oil in cooking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. About how many servings of vegetables do you eat, not counting salad or potatoes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. About how many servings of fruit do you eat, not counting juices?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. About how many servings of cold cereal do you eat?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The required coding scheme for the above set of frequencies is to use a "1" for the first column, a "2" for the second column, etc. Thus, the input codes have the following values:

<u>Code</u>	<u>Questionnaire Text</u>
1	Less Than Once Per Week
2	1-2 Per Week
3	3-4 Per Week
4	5-6 Per Week

5	1 Per Day
6	1 1/2 Per Day
7	2 Per Day
8	3 Per Day
9	4+ Per Day
Unstated	Missing Code

10A.23 LOW FAT FOODS

Examples: SCAN92 Question 14.

This question appears on the SCAN92 questionnaire as show below:

When you eat the following foods, how often do you eat a low-fat or non-fat version of that food?

fat	CHEESE	<input type="radio"/> Always low-fat	<input type="radio"/> Sometimes	<input type="radio"/> Rarely low-fat
fat	ICE CREAM/YOGURT	<input type="radio"/> Always low-fat	<input type="radio"/> Sometimes	<input type="radio"/> Rarely low-fat
fat	SALAD DRESSING	<input type="radio"/> Always low-fat	<input type="radio"/> Sometimes	<input type="radio"/> Rarely low-fat

DIETSYS expects a three character field for this question. Only the three foods listed above may be asked in the question; none may be omitted from the question and they must be coded in the order given above.

Code each of the three responses as follows:

Always low-fat	=	1
Sometimes	=	2
Rarely low-fat	=	3
Unstated	=	Missing Code

The DIETSYS Nutrient Analysis uses the response to this question to implement the LowFatFoods option (Section 16).

Enhancement: DIETSYS was enhanced to allow flexibility in this question (as of version 3.4). This change is documented in the README.TXT file installed with the software.

10A.24 LIGHT OR DARK POULTRY

Examples: Not used on any NCI questionnaire versions included with DIETSYS v3.0.

DIETSYS expects the same 1 character code for both Categorical and Non-Categorical questionnaires. The text and coding scheme for this HHHQ Question are:

When you eat poultry, is it usually:

Light Meat	=	1
Dark Meat	=	2
Either or Both	=	3
Unstated	=	Missing Code

The DIETSYS Nutrient Analysis uses the response to this question to implement the DarkQues option (Section 16).

10A.25 **TUNA**

Examples: Not used on any NCI questionnaire versions included with DIETSYS v3.0.

This HHHQ Question refers to whether oil packed or water packed tuna is usually eaten. DIETSYS expects the same 1 character code for both categorical and Non-Categorical questionnaires. The recommended phrasing and required coding are shown below.

When you eat tuna, is it usually:

Oil Packed	=	1
Water Packed	=	2
Either or Mixed	=	3
Unstated	=	Missing Code

The DIETSYS Nutrient Analysis uses the response to the TUNA question to implement the TunaQues option (Section 16).

10A.26 **LEANNESS OF BEEF**

Examples: Not used on any NCI questionnaire versions included with DIETSYS v3.0.

DIETSYS expects the same 1 character code for both Categorical and Non-Categorical questionnaires. The recommended phrasing and required coding are shown below.

When you eat hamburger or beef, is it usually:

Regular	=	1
Lean	=	2
Extra Lean	=	3
Unstated	=	Missing Code

The DIETSYS Nutrient Analysis uses the response to this question to implement the LeanMeat option.

10A.27 **SPECIAL DIET**

The recommended phrasing and required coding are shown below.

Are you on a special diet?

No	=	1
Weight Loss	=	2
For Medical Condition	=	3
Vegetarian	=	4
Low Salt	=	5
Low Cholesterol	=	6

Weight Gain = 7

DIETSYS expects a 2 character response as follows:

2 Missing Codes if no special diet is indicated.

1 digit (1-7 as shown above) followed by the Missing Code if one special diet is indicated.

2 digits (each 1-7 as shown above) if 2 special diets are indicated.

The SPECIAL DIET code is written to the DIETSYS Analysis Output File and is used to print the text associated with the codes in the DIETSYS Analysis Report.

10A.28 **HEIGHT**

3 Digits are expected for HEIGHT in the following order:

Feet: A 1 digit code of 0-8 or the Missing Code are valid.

Inches: A 2 digit code of 00-11 or two Missing Codes are valid.
NO BLANKS PERMITTED, USE LEADING ZEROES

Height is written to the DIETSYS Analysis Output File and printed to the Analysis Report. Height is used to determine whether the respondent is within a desirable weight range. Advice regarding the respondent's desired weight will be printed to the Analysis Report if it has been selected as an Advice Variable. HEIGHT is also used by DIETSYS in the calculation of the "Scores for Non-dietary factors" (Section 19).

10A.29 **WEIGHT**

3 Digits are expected for WEIGHT in pounds. Valid codes are:

Weight (lb) = 000-998

Unstated = Three Missing Codes

NO BLANKS PERMITTED, USE LEADING ZEROES

Weight is written to the DIETSYS Analysis Output File and printed to the Analysis Report. The respondent's weight is compared to the desired weight calculated based on height. Advice regarding the respondent's desired weight will be printed to the Analysis Report if it has been selected as an Advice Variable. WEIGHT is also used by DIETSYS in the calculation of the "Scores for Non-dietary factors" (Section 19).

10A.30 **MOST EVER WEIGHED**

Example: FULL87, Question 33

Weight (lb) = 000-998

Unstated = Three Missing Codes

This HHHQ Question is not used in any way by DIETSYS.

10A.31 **AMOUNT WEIGHT GAINED/LOST IN PAST YEAR**

DIETSYS expects the same 1 character code for both Categorical and Non-Categorical questionnaires. The recommended phrasing and required coding are shown below.

Have you gained or lost more than five pounds in the past year?

No	=	1
Lost 5-15 lbs	=	2
Lost 16-25 lbs	=	3
Lost > 25 lbs	=	4
Gained 5-15 lbs	=	5
Gained 16-25 lbs	=	6
Gained > 25 lbs	=	7
More than 1 response	=	8
Unstated	=	Missing Code

The response to this question is not used by DIETSYS in any way.

10A.32 **HOURS OF SLEEP PER NIGHT**

DIETSYS expects the same 1 character code for both Categorical and Non-Categorical questionnaires. The recommended phrasing and required coding are shown below.

How many hours of sleep do you usually get at night?

6 hours or less	=	1
7 hours	=	2
8 hours	=	3
9 hours or more	=	4
Unstated	=	Missing Code

This response is used by in the "Scores for Non-Dietary Factors" utility (Section 19).

10A.33 **NUMBER OF WEIGHT-LOSS DIETS**

DIETSYS expects the same 1 character code for both Categorical and Non-Categorical questionnaires. The recommended phrasing and required coding are shown below.

About how many times have you gone on a diet to lose weight?

Never	=	1
1-2 times	=	2
3-5 times	=	3
6-8 times	=	4
9-11 times	=	5
12 or more	=	6
Unstated	=	Missing Code

The response to this question is not used by DIETSYS in any way.

10A.34 **STRESS**

DIETSYS expects the same 1 character code for both Categorical and Non-Categorical questionnaires. The recommended phrasing and required coding are shown below.

How often do you feel under stress which makes you tense or worried, or causes physical problems such as stomach or back trouble or headaches?

Every Day = 1
Several times a week = 2
Several times a month = 3
Several times a year = 4
Rarely or never = 5
Unstated = Missing Code

The response to the STRESS question is not used in any way by DIETSYS.

10A.35 **PHYSICAL ACTIVITIES**

DIETSYS expects a 6 character field for this HHHQ Question. This HHHQ Question is actually six questions combined into one field. PHYSICAL ACTIVITIES appears as question 37 on the FULL87 questionnaire as shown below.

	MORE THAN ONCE A WEEK	ABOUT ONCE A WEEK	A FEW TIMES A MONTH	A FEW TIMES A YEAR	RARELY OR NEVER
Active sports	_____	_____	_____	_____	_____
Doing physical exercises	_____	_____	_____	_____	_____
Jogging or running	_____	_____	_____	_____	_____
Swimming or taking long walks	_____	_____	_____	_____	_____
Gardening, fishing, hunting	_____	_____	_____	_____	_____
Something else _____	_____	_____	_____	_____	_____

The questions in the PHYSICAL ACTIVITIES field must all be present and stored in the Questionnaire Data File in the order shown above. The coding for PHYSICAL ACTIVITIES is the same for Categorical and Non-Categorical questionnaires.

More Than Once A Week = 1
About Once A Week = 2
A Few Times A Month = 3
A Few Times A Year = 4
Rarely or Never = 5
Unstated = Missing Code

PHYSICAL ACTIVITIES is used by DIETSYS in the calculation of the "Scores for Non-dietary factors" (Section 19).

10A.36 CLOSE FRIENDS/RELATIVES

DIETSYS expects a 3 character field for this HHHQ Question. This HHHQ Question is actually three questions combined into one field. The recommended text and required coding are shown below.

How many close friends do you have? (People that you feel at ease with, can talk to about private matters, and can call on for help.)

How many relatives do you have that you feel close to?

How many of these friends or relatives do you see or talk to at least *once a month*?

All questions in the CLOSE FRIENDS/RELATIVES field must be present and stored in the order shown above. The coding for CLOSE FRIENDS/RELATIVES is the same for Categorical and Non-Categorical questionnaires.

None = 1
1 or 2 = 2
3 to 5 = 3
6 to 9 = 4
10 or more = 5
Unstated = Missing Code

CLOSE FRIENDS/RELATIVES is used by DIETSYS in the calculation of the "Scores for Non-dietary factors" (Section 19).

10A.37 SOCIAL ACTIVITIES

DIETSYS expects a 2 character field for this HHHQ Question. This HHHQ Question is actually two questions combined into one field. SOCIAL ACTIVITIES appears as question 39 on the FULL87 questionnaire as shown below.

	MORE THAN ONCE A WEEK	ABOUT ONCE A WEEK	A FEW TIMES A MONTH	A FEW TIMES A YEAR	RARELY OR NEVER
Go to church or temple	_____	_____	_____	_____	_____
Participate in group meetings or activities (such as clubs, PTA, professional, labor or service groups).	_____	_____	_____	_____	_____

Both questions in the SOCIAL ACTIVITIES field must be present and stored in the order shown above. The coding for SOCIAL ACTIVITIES is the same for Categorical and Non-Categorical questionnaires.

More Than Once A Week = 1
About Once A Week = 2
A Few Times A Month = 3
A Few Times A Year = 4
Rarely or Never = 5
Unstated = Missing Code

SOCIAL ACTIVITIES is used by DIETSYS in the calculation of the "Scores for Non-dietary factors" (Section 19).

10A.38 CIGARETTE SMOKING

This HHHQ Question consists of 6 optional segments. The recommended phrasing and required coding for each segment is given below.

Have you smoked at least 100 cigarettes in your entire life?

No = 1
Yes = 2
Unstated = Missing Code

About how old were you when you first started smoking cigarettes fairly regularly?

Age in years = 00-98
Unstated = Two Missing Codes
NO BLANKS PERMITTED, USE LEADING ZEROES.

On the average of the **entire time you smoked**, how many cigarettes per day did you smoke?

Coding for Non-Categorical Questionnaires:

Number of = 00-98

Unstated = 99

NO BLANKS PERMITTED, USE LEADING ZEROES.

Coding for Categorical Questionnaires:

1-5 = 1

6-14 = 2

15-24 = 3

25-34 = 4

35 or more = 5

Unstated = Missing Code

Do you smoke cigarettes now?

No = 1

Yes = 2

Unstated = Missing Code

How old were you when you stopped smoking?

Age in years = 00-98

Unstated = Two Missing Codes

NO BLANKS PERMITTED, USE LEADING ZEROES.

On the average, about how many cigarettes a day do you smoke **now**?

Coding for Non-Categorical Questionnaires:

Number of = 00-98

Unstated = 99

NO BLANKS PERMITTED, USE LEADING ZEROES.

Coding for Categorical Questionnaires:

1-5 = 1

6-14 = 2

15-24 = 3

25-34 = 4

35 or more = 5

Unstated = Missing Code

CIGARETTE SMOKING is used by DIETSYS in the calculation of the "Scores for Non-dietary factors: (Section 19). To calculate the Pack Years index, you **must** ask:

About how old were you when you first started smoking cigarettes fairly regularly?

How old were you when you stopped smoking?

On average of the **entire time you smoked**, how many cigarettes per day did you smoke?

"Do you smoke cigarettes now?" and Age are also used to calculate this index. To be used, Age must be asked as number of years (2 character format, see Section 10A.4). But if Age is a 1 digit age code (or isn't asked), then the age stopped smoking question could be coded with the respondent's age if the respondent is a current smoker. In this case, you should probably change the question text for age stopped smoking.

10A.39 PIPE OR CIGAR SMOKING

DIETSYS expects a 6 character field for this HHHQ Question. This HHHQ Question is actually three questions combined into one field.

The segments of the PIPE OR CIGAR SMOKING field must all be present and stored in the following order:

<u>Field</u>	<u>Number of Characters</u>
Smoke pipe/cigars regularly?	1
For how many years	2
About how many pipes or cigars?	2
Per day or week?	1

The recommended phrasing and required coding are shown below. Code each segment as shown below for Categorical and Non-Categorical questionnaires.

Have you ever smoked a pipe or cigars regularly?

No = 1
 Yes = 2
 Unstated = Missing Code

For how many years?

Years smoked = 01-98
 Unstated = 2 Missing Codes

About how many pipes or cigars?

Number smoked = 01-98
 Unstated = 2 Missing Codes

Per day or week?

Day = 1
 Week = 2
 Unstated = Missing Code

The PIPE OR CIGAR SMOKING responses are not used in any way by DIETSYS. If you choose to ask a subset of these questions or use a different form for the questions, simply add the question to your CFG file as an "Other Question" rather than selecting PIPE OR CIGAR SMOKING from the list of HHHQ Questions.

10A.40 VITAMIN SUPPLEMENTS

Examples: SCAN92 Questions 9-11; FULL87 Question 10; BRIEF87 Question 9

The vitamin supplement section is comprised of 5 segments:

- Take vitamins or minerals regularly
- Multiple Vitamins
- Single Vitamins
- Units of Single Vitamins
- Other Vitamin

Each of these segments must be specified in the CFG File as a separate HHHQ Question. This gives you the flexibility to arrange these segments in any order.

10A.40.1 **Take vitamins or minerals regularly.** The full recommended text for this question is: "During the past year have you taken any vitamins or minerals?" This question is coded in the same format for both Categorical and Non-Categorical questionnaires.

No	=	1
Yes, fairly regularly	=	2
Yes, but not regularly	=	3
Unstated	=	Missing Code

10A40.2 **MULTIPLE VITAMINS.** DIETSYS can analyze frequencies for up to three Multiple Vitamins: Stress-tabs type, Therapeutic/Theragran type, and One-A-Day type. One or all of these multiple vitamins may be asked in any order. The data for those selected must be in a contiguous field.

For each multiple vitamin it is required that frequency be asked. It is optional to ask how many years each multiple vitamin has been used (as shown on SCAN92, question 9). Although asking "For How Many Years" is optional, it is strongly recommended.

The amount of each nutrient contained in the Multiple Vitamins is stored in the DIETSYS Food Database. See Sections 12.11 and 12.33.

Coding Multiple Vitamins for Categorical Questionnaires:

If number of years used is included with the multiple vitamin frequency, then a 2 character field is expected for each MULTIPLE VITAMIN. The first character must be frequency, the second is the code for number of years. If only frequency is asked, a 1 character field is expected for each MULTIPLE VITAMIN.

Coding Multiple Vitamins (Categorical):

1st character is frequency:

NONE = 1
1-3 per week = 2
4-6 per week = 3
1 per day = 4
2 per day = 5
3 per day = 6
4 per day = 7
5+ per day = 8
Unstated = Missing Code

2nd character is "For How Many Years?" (optional):

Less than 1 year = 1
1-2 years = 2
3-5 years = 3
6-9 years = 4
10+ years = 5
Unstated = Missing Code

Coding Multiple Vitamins for Non-Categorical Questionnaires:

If number of years used is included with the multiple vitamin frequency, then a 4 character field is expected for each MULTIPLE VITAMIN. The first three characters must be frequency, the fourth is the code for number of years. If only frequency is asked, a 3 digit field is expected for each MULTIPLE VITAMIN.

Coding Multiple Vitamins (Non-Categorical):

1st two characters are number of times:

Number of times = 00-98

Unstated = 99

NO BLANKS PERMITTED, USE LEADING ZEROES

3rd character is unit of time:

Day = 1
Week = 2
Month = 3
Year = 4
Unknown = 9

4th character is "For How Many Years?" (optional):

Less than 1 year = 1
1-2 years = 2
3-5 years = 3
6-9 years = 4
10+ years = 5
Unstated = Missing Code

10A.40.3 **SINGLE VITAMINS.** DIETSYS can analyze frequencies for up to six Single Vitamins: Vitamin A, Vitamin C, Vitamin E, Calcium, Beta-Carotene, and Zinc. One or all of these single vitamins may be asked in any order. The data for those selected must be in a contiguous field.

For each single vitamin it is required that frequency be asked. It is optional to ask how many years each single vitamin has been used (as shown on SCAN92, question 9). Although asking "For How Many Years" is optional, it is strongly recommended.

Coding Single Vitamins for Categorical Questionnaires:

If number of years used is included with the single vitamin frequency, then a 2 character field is expected for each SINGLE VITAMIN. The first character must be frequency, the second is the code for number of years. If only frequency is asked, a 1 character field is expected for each SINGLE VITAMIN.

Coding Single Vitamins (Categorical):

1st character is frequency:

NONE	=	1
1-3 per week	=	2
4-6 per week	=	3
1 per day	=	4
2 per day	=	5
3 per day	=	6
4 per day	=	7
5+ per day	=	8
Unstated	=	Missing Code

2nd character is "For How Many Years?" (optional):

Less than 1 year	=	1
1-2 years	=	2
3-5 years	=	3
6-9 years	=	4
10+ years	=	5
Unstated	=	Missing Code

Coding Single Vitamins for Non-Categorical Questionnaires:

If number of years used is included with the single vitamin frequency, then a 4 character field is expected for each single vitamin. The first three characters must be frequency, the fourth is the code for number of years. If only frequency is asked, a 3 digit field is expected for each single vitamin.

Coding Single Vitamins (Non-Categorical):

1st two characters are number of times:

Number of times = 00-98

Unstated = 99

NO BLANKS PERMITTED, USE LEADING ZEROES

3rd character is unit of time:

Day	=	1
Week	=	2
Month	=	3
Year	=	4
Unstated	=	9

4th character is "For How Many Years?" (optional):

Less than 1 year	=	1
1-2 years	=	2
3-5 years	=	3
6-9 years	=	4
10+ years	=	5
Unstated	=	9

NOTE: The FULL87 questionnaire includes the pill dosage as the fourth character of each single vitamin field (refer to FULL87 question 10). Therefore, DIETSYS will recognize single vitamins in this format, but for Non-Categorical questions only. If pill dosage is included as the fourth character, "For How Many Years" is not allowed. Refer to the coding instructions for "Units of Single Vitamins" below for additional information.

10A.40.4 UNITS OF SINGLE VITAMINS. This refers to the content of each pill the respondent usually takes. For Vitamin A the amount is expected in IUs. For Vitamin E, the amount is expected in alpha-TE. For Vitamin C, Calcium, and Zinc the amount is expected in milligrams. For Beta-carotene, the amount is expected in micrograms.

The DIETSYS expects a 1 character code for UNITS OF SINGLE VITAMINS.

On Categorical questionnaires, the UNITS OF SINGLE VITAMINS must be asked as a separate question. You may ask units for some or all of the vitamins used in the single vitamin frequency questions.

On Non-Categorical questionnaires, the UNITS OF SINGLE VITAMINS may be coded as a separate question or may be coded as the fourth character of each single vitamin frequency field. The FULL87 and BRIEF87 questionnaires include the pill dosage as the fourth character of each single vitamin field as shown in FULL87, Question 10. On FULL87, the frequency for Vitamin A is coded in columns 53-55, the unit for Vitamin A is coded in column 56.

In order to be compatible with FULL87 and BRIEF87 questionnaires, DIETSYS allows the configuration above for single vitamins. However, DIETSYS also allows the pill dosage to be asked as a separate question so that the fourth character of the single vitamin fields may be used for "how many years".

The format shown in Question 9 of the SCAN92 questionnaire shows how both "How Many Years" and "milligram or IUs per pill" may be included for single vitamins.

A maximum of 8 selections may be presented to the respondent for pill doses. The SCAN92 questionnaire has 5 choices. FULL87 allows 8 doses. '1-7' are the valid codes if there are 7 choices, '1-8' if there are 8, etc. The Missing Code should be coded for no response. '9' must be used for the Missing Code if the questionnaire is Non-Categorical. The mg or IU values used for each code are set in the DIETSYS Foods Database. See Section 12 for instructions in setting the values of the Single Vitamin Units.

10A.40.5 **OTHER VITAMINS.** This question asks the respondent to identify any other supplements taken which were not mentioned in the Single Vitamin question. No nutrients are calculated from these responses, simply the fact of their use is reported. One or all of the following may be presented as choices:

Yeast
Selenium
Zinc¹
Iron
Beta-carotene¹
Cod liver oil
Other, unspecified
No or don't know may also be included as a choice

Coding of Other Vitamins on Categorical Questionnaires:

This question appears on the SCAN92 questionnaire (Question 11) in a Categorical format as shown below:

Do you regularly take pills containing any of these nutrients?
☐ No or don't know ☐ Iron ☐ Beta-carotene

☐ Zinc ☐ Selenium ☐ _____

6 characters are used to code the other vitamins in this example, 1 digit for each vitamin listed on the questionnaire. You may use up to 8 characters, corresponding to the number of choices on your questionnaire.

For each vitamin, code:
0 NOT SELECTED by respondent
1 SELECTED by respondent

The number of vitamins listed and their sequence can be set in the CFG File (Section 11). The sequence set in the CFG File refers to the order of the coded responses in the Questionnaire Data File. Be certain your scanner or keyer codes the responses in this same sequence.

¹ Do not list in Other Vitamin question if used as a Single Vitamin.

Coding of Other Vitamin on Non-Categorical Questionnaires:

This question appears on the FULL87 and BRIEF87 questionnaires in its Non-Categorical format.

One digit is used to code the response to Other Vitamins on Non-Categorical Questionnaires. Use the following codes:

Yeast	=	1
Selenium	=	2
Zinc	=	3
Iron	=	4
Beta-carotene	=	5
Cod liver oil	=	6
Other, not mentioned	=	7
More than one response	=	8
Unstated	=	9

10A.41 MEDICAL INFORMATION

DIETSYS expects a 58 character field for this HHHQ Question. MEDICAL INFORMATION is actually 4 questions combined into one field (questions 23-26 on the FULL87 questionnaire). MEDICAL INFORMATION is not used in any way by the DIETSYS software. It is included as an HHHQ Question to make it easy for users to set up DIETSYS for a questionnaire that has the MEDICAL INFORMATION responses coded exactly as they are coded on FULL87.

All segments of this question must be coded the same for both Categorical and Non-Categorical questionnaires. The positions listed next to each segment are the positions within the 36 character MEDICAL INFORMATION field.

How often hospitalized in past 5 years (1st position in MEDICAL field)

Number of times	=	0-7
8 or more	=	8
Unstated	=	Missing Code

Ever had X-ray treatments/tests (Position 2)

No	=	1
Yes	=	2
Unstated	=	Missing Code

How many times X-ray treatments/test (Position 3)

0-7	=	Number of times
8	=	8 or more
9	=	Unstated

Age at first X-ray treatment/test (Position 4-5)

Age = 01-98
Unknown or unstated = 99

Ever had radium/cobalt, radioactive isotope (Position 6)

No = 1
Yes = 2
Unstated = 9

How many times radium/cobalt (Position 7)

Number of times = 0-7
8 or more = 8
Unstated = 9

Age at first radium/cobalt treatment (Position 8-9)

Age = 01-98
Unknown or unstated = 99

Ever had upper GI series (Position 10)

No = 1
Yes = 2
Unstated = 9

How many times upper GI series (Position 11)

Number of times = 0-7
8 or more = 8
Unstated = 9

Age at first upper GI series (Position 12-13)

Age = 01-98
Unknown or unstated = 99

Ever had lower GI series (Position 14)

No = 1
Yes = 2
Unstated = 9

How many times lower GI series (Position 15)

Number of times = 0-7
8 or more = 8
Unstated = 9

Age at first lower GI series (Position 16-17)

Age = 01-98
Unknown or unstated = 99

HAVE YOU EVER BEEN TOLD BY A DOCTOR THAT YOU HAD ANY OF THE FOLLOWING CONDITIONS? (Positions 18-44)

For each condition:

No = 1
Yes = 2
Unstated = 9

Heart Disease (Position 18)
Kidney Disease (Position 19)
Heart Attack (Position 20)
Bladder Disease (Position 21)
High Blood Pressure (Position 22)
Liver Cirrhosis (Position 23)
Stroke (Position 24)
Hepatitis (Position 25)
Tuberculosis (Position 26)
Stomach Ulcers (Position 27)
Bronchitis, Emphysema (Position 28)
Rheumatoid Arthritis (Position 29)
Asthma (Position 30)
Other Arthritis (Position 31)
Hay Fever (Position 32)
Osteoporosis (Position 33)
Diverticulosis (Position 34)
Fractured Hip (Position 35)
Rectal/colon polyps (Position 36)
Prostate Trouble (Position 37)
Chronic Colitis (Position 38)
Abnormal Pap Smear (Position 39)
Diabetes (Position 40)
Skin Cancer (Position 41)
Thyroid Condition (Position 42)
Leukemia (Position 43)
Other Cancer (Position 44)

CANCER TYPES AND YEAR DIAGNOSED (Positions 45-50)

If yes was responded to leukemia, skin, or other cancer, code up to two types of cancer using the codes below. Two Missing Codes = none or unstated.

01 Bladder	10 Leukemia	18 Skin-Melanoma
02 Bone	11 Lung, bronchus	19 Skin-Not Melanoma (Basal or squamous)
03 Brain	12 Lymphoma, including Hodgkins	20 Skin-Not Specified
04 Breast	13 Mouth, oral	21 Stomach
05 Cervix	14 Ovary	22 Thyroid
06 Colon	15 Pancreas	23 Uterus
07 Esophagus	16 Prostate	24 Other
08 Kidney	17 Rectum	
09 Liver		

Type of 1st Cancer (Positions 45-46)

Year of diagnosis of First Cancer (Positions 47-48)

Year diagnosed = 00-98

Unstated = Two Missing Codes

Type of 2nd Cancer (Positions 49-50)

Year of diagnosis of 2nd Cancer (Position 51-52)

Year diagnosed = 00-98

Unstated = Two Missing Codes

QUESTION 26: IN THE PAST YEAR, HAVE YOU HAD... (Positions 53-58)

For each use the following codes

No = 1

Yes = 2

Unstated = Missing Code

Bleeding or sore gums (Position 53)

Difficulty seeing in dark (Position 54)

Bruise Easily (Position 55)

Frequent or Chronic Fever (Position 56)

Nosebleeds (Position 57)

Frequent constipation or hemorrhoids (Position 58)

The MEDICAL INFORMATION fields are not used in any way by DIETSYS. If you choose to ask a subset of these questions or use a different form for the questions, simply add the question to your CFG file as an "Other Question" rather than selecting MEDICAL INFORMATION from the list of HHHQ Questions.

10A.42 OCCUPATIONAL INFORMATION

DIETSYS expects a 33 character field for this HHHQ Question. This HHHQ Question is actually 3 questions combined into one field (as seen as questions 27-29 on the FULL87 questionnaire). OCCUPATIONAL INFORMATION is not used in any way by the DIETSYS software. It is included as an HHHQ Question to make it easy for users to set up DIETSYS for a questionnaire that has the OCCUPATIONAL INFORMATION responses coded exactly as they are coded on FULL87.

The segments of OCCUPATIONAL INFORMATION must all be present and stored in the following order:

<u>Field</u>	<u>Number of Characters</u>
Employment Status	1
Job/occupation	9
Years in the Job	2
Work Indoors or Outdoors	1
Hazards	20

The coding for each of these segments is the same for Categorical and Non-Categorical questionnaires. The required coding for each segment is given below.

What is your current employment status? Check the one that applies to the greatest percent of your time.

Employed	=	1
Homemaker	=	2
Retired	=	3
Disabled, unable to work	=	4
Unemployed	=	5
Student	=	6
Other	=	7
Unstated	=	Missing Code

What has been your usual occupation or job -- the one you have worked at the longest? (For example, carpenter, executive, salesman, foreman, waitress, truck driver)

9 characters of text should be coded in the Questionnaire Data File in response to this question. Truncate if necessary.

Years in this job

Number of years	=	01-98
Unstated	=	Two Missing Codes

In your work, did you spend more time indoors or outdoors?

Indoors = 1
Outdoors = 2
Some of each = 3
Unstated = Missing Code

In your work, have you ever been exposed for a year or more to any of the following?

Twenty columns are used to code occupational environmental hazards. Each of these must be coded in the following way:

No = 1
Yes = 2

Using the Missing Code for "don't know" or no response.

The Occupational Hazards must appear in the following order:

Asbestos
Iron Foundry
Radiation
Nickel Smelting
Welding
Mining
Coal tar
Lumber, wood dust
Lubricants
Rubber
Benzidine
Chemicals, plastics
Benzene
Pesticides
Isopropyl oil
Mustard gas
Dyestuffs
Chromium
Arsenic
Cadmium, beryllium

10A.43 **FAMILY HISTORY**

DIETSYS expects an 18 character field for this HHHQ Question. FAMILY HISTORY is not used in any way by the DIETSYS software. It is included as an HHHQ Question to make it easier to set up DIETSYS for a questionnaire that has the FAMILY HISTORY responses coded exactly as they are coded on the FULL87 questionnaire. This question appears as question 30 on FULL87.

All segments of this question must be coded the same for both Categorical and Non-Categorical questionnaires. The positions listed next to each segment are the positions within the 18 character FAMILY HISTORY field.

Any close relatives with cancer (1st Position in FAMILY field)

No = 1
Yes = 2
Unstated = Missing Code

Number of relatives with cancer (Position 2)

Number of relatives listed = 1-8
Unknown or unstated = Missing Code

Relative #1: first Relative listed who had cancer (Position 3)

Mother = 1
Father = 2
Brother = 3
Sister = 4
Son = 5
Daughter = 6
Grandfather = 7
Grandmother = 8
None or unstated = Missing Code

Is Relative #1 alive or dead (Position 4)

Alive = 1
Dead = 2
Unknown or unstated = Missing Code

Age of Relative #1 if alive or at death (Positions 5-6)

Number of years = 01-98
Unstated = Two Missing Codes

Type of Cancer - Relative #1 (Positions 7-8)

(Use same codes as shown in Section 10A.41)

Age at diagnosis - Relative #1 (Positions 9-10)

Number of years = 01-98
Unknown or unstated = Two Missing Codes

Relative #2: Second Relative listed who had cancer (Position 11)

Mother = 1
Father = 2
Brother = 3
Sister = 4
Son = 5
Daughter = 6
Grandfather = 7
Grandmother = 8
None or unstated = Missing Code

Is Relative #2 alive or dead (Position 12)

Alive = 1

Dead = 2

Unknown or unstated = Missing Code

Age of Relative #2 if alive or at death (Positions 13-14)

Number of years = 01-98

Unstated = Two Missing Codes

Type of Cancer - Relative #2 (Positions 15-16)

(Use same codes as shown in Section 10A.41)

Age at diagnosis - Relative #2 (Positions 17-18)

Number of years = 01-98

Unknown or unstated = Two Missing Codes

FAMILY HISTORY is not used in any way by DIETSYS.